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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

January 24, 2019

Kirk Nicholes, Resident Agent  
Alton Coal Development, LLC  
463 North 100 West, Suite 1  
Cedar City, Utah 84720

Subject: Coal Hollow LBA Block 1, Alton Coal Development, LLC, Coal Hollow Mine,  
C/015/0018, Task #5833

Dear Mr. Nicholes:

The Division has reviewed your application. The Division has identified deficiencies that must be addressed before final approval can be granted. The deficiencies are listed as an attachment to this letter.

The deficiencies authors are identified so that your staff can communicate directly with that individual should questions arise. The plans as submitted are denied. Please resubmit the entire application.

If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen  
Permit Supervisor

SKC/sqs

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## Technical Analysis and Findings

### Utah Coal Regulatory Program

**PID:** C0250005  
**TaskID:** 5833  
**Mine Name:** COAL HOLLOW  
**Title:** LBA BLOCK 1

## Summary

The application provides mining plans for a block of federal coal that is located within the SW1/4 NW1/4 of Section 20 (Dwg 1-3). The South Lease disturbed area boundary will increase from 372.5 acres (Chap 1, p. 18) to 414.5 acres. The federal block is designated 2019 mining on Plate 5-2. Overburden will be removed as shown on Dwg 5-16. Under the proposed mining scenario, the underground mining facilities in Pit 10 would be eliminated and Pits F7 and F8 will become the access for UG mining.

pburton

## General Contents

### Right of Entry

#### Analysis:

The application does not meet the State of Utah R645 requirements for Right of Entry, because the federal government has been shut down since December 21, 2018 and the coal lease is in limbo. The application cannot be approved until the coal lease is obtained (Chap 1, p. 15).

The surface Right of Entry document is the Pugh Lease item 8.04 found in Appendix 1-2 (Confidential 10152009.doc).

#### Deficiencies Details:

The application does not meet the R645-301-114 Right of Entry requirements. The following deficiency must be addressed prior to final approval:

R645-301-114, The application can not be approved until the coal lease is obtained (Chap 1., p. 15).

pburton

### Permit Term

#### Analysis:

The application does not meet the State of Utah R645 requirements for Permit Term, because the termination date for the phases of mining in the South Lease are not provided. This is likely related to the uncertain federal lease issue date. However, perhaps an approximate date for the end of phase 4 could be provided with a reference to Dwg 5-38 for completion dates for mining in phases 1 and 3, which are contingent phase 4.

#### Deficiencies Details:

The application does not meet the R645-301-116 permit term requirements. the following deficiency must be address prior to final approval:

R645-301-116.100, Provide an approximate termination date for the 4 mining phases in the South Lease on page 19 of Chapter 1 and reference Dwg 5-38 for completion dates for the phases contingent upon phase 4.

pburton

## Permit Application Format and Contents

### Analysis:

The amendment meets the State of Utah R645 requirements for Permit Application Format and Contents.

Previously this amendment did not satisfy R645-301-121.100 and R645-301-121.200 because information was missing or features incorrectly labeled within Drawings 5-9, 5-17, and 5-22. Permittee has corrected the minor typographical and arithmetic errors present in these Drawings and now meet the requirements for Permit Application Format and Contents.

jeatchel

## Environmental Resource Information

### Historic and Archeological Resource Information

#### Analysis:

The amendment does not meet the State of Utah R645-301-411 requirements for historic and archeological resource information. Due to the ongoing federal government shutdown, consultation with BLM-KFO has not taken place and cannot take place until the shutdown is resolved. As such, DOGM cannot make a finding regarding the adequacy of the historic and archeological resource information related to this amendment.

#### Deficiencies Details:

The amendment does not meet the State of Utah R645-301-411 requirements for historic and archeological resource information. The following deficiency must be addressed prior to final approval:

R645-301-411: Consultation between DOGM and BLM-KFO must occur to ensure historic and archeological information is accurate and accounted for. This consultation cannot take place until the federal government shutdown is resolved. The permittee is not obligated to provide anything at this time, however, dependant on the consultations with DOGM and BLM-KFO, future action may be required of the permittee.

tmiller

### Geologic Resource Information

#### Analysis:

Geologic Resource information was provided in the original Coal Hollow permit application and was incorporated into the Mining and Reclamation Plan on October 15, 2009. Information for the South Lease area was adequately characterized and has not changed as a result of this amendment. LBA Block 1 is entirely located within the existing permit boundary of the South Lease area.

dhaddock

### Probable Hydrologic Consequences Determination

#### Analysis:

The amendment meets the State of Utah R645 requirements for Probable Hydrologic Consequences.

The amendment proposes to mine the federal coal sitting north of Pit 10 in the south lease. Drawings 5-9 and 5-10 show the coal extraction area and the location and orientation of the pits to mine the coal. The PHC is updated to state the pits will be located entirely to the west of the north-south trending Tropic shale ridge running through the permit area and open-pit mining will not disturb the aquifer resting to the east of the ridge. If future amendments on open pit extents propose to mine through this ridge the PHC shall be updated to address any impacts to the hydrologic balance that will occur. Including potentially reduced flows at springs resting along the southern end of the ridge near the Dame's

property.

kstorrar

## Maps Subsurface Water Resources

### Analysis:

The amendment does not meet the State of Utah R645 requirements for Subsurface Water Resource Maps.

The amendment must update Drawings 7-6 and 7-15 within the MRP to show the cross-sectional and plan view extent of mining activities in the LBA Block 1. Open pit mining is set to resume adjacent to the Tropic Shale ridge in the south lease. It is well known a large alluvial aquifer rests to the east of the Tropic Shale ridge. The mining operations at the Coal Hollow mine have taken significant precautions in the past to not mine through the aquitard shale ridge barrier and leave the alluvial aquifer undisturbed.

It is therefore necessary to update Drawing 7-6 to show the cross-sectional lateral extent of the open pit setbacks along the eastern boundary and the location of the highwall miner auger holes in relation to the Tropic Shale ridge and alluvial deposits to the east. The groundwater table in the alluvial deposits must be shown as well. The cross-section A-A' must be shifted north to span the proposed open pits within the LBA Block 1. Drawing 7-15 must be updated to show the proposed pit locations, highwall auger hole extents and the boundary of the 'Excavated Area Disturbance' shown on Plate 5-17 in the amendment. The update to this map must still include the aerial orthoimage and the Sink Valley Fault line. Updates to these maps must be prepared and certified by the appropriate registered professional according to their discipline as outlined in R645-301-512.

### Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Subsurface Water Resource Maps. The following deficiencies must be addressed prior to final approval:

R645-301-722.100: The amendment must update Drawings 7-6 and 7-15 within the MRP to show the cross-sectional and plan view extent of mining activities in the LBA Block 1. Drawing 7-6 must be updated to show the cross-sectional lateral extent of the open pit setbacks along the eastern boundary and the location of the highwall miner auger holes in relation to the Tropic Shale ridge and alluvial deposits to the east. The groundwater table in the alluvial deposits must be shown as well. The cross-section A-A' must be shifted north to span the proposed open pits within the LBA Block 1. Drawing 7-15 must be updated to show the proposed pit locations, highwall auger hole extents and the boundary of the 'Excavated Area Disturbance' shown on Plate 5-17 in the amendment. The update to this map must still include the aerial orthoimage and the Sink Valley Fault line. Updates to these maps must be prepared and certified by the appropriate registered professional according to their discipline as outlined in R645-301-512.

kstorrar

## Operation Plan

### Fish and Wildlife Protection and Enhancement Plan

### Analysis:

The amendment does not meet the State of Utah R645-301-333 requirements for fish and wildlife protection and enhancement plan. The BLM's sale of this lease comes with a number of lease stipulations to be implemented prior to surface-disturbing activities. Lease Stipulation #5, found in the Alton Coal Tract Lease by Application Final Environmental Impact Statement, requires a wildlife management plan that is approved by the BLM's Kanab Field Office (KFO) and is in conformance with the BLM-KFO's Resource Management Plan (RMP). Additional requirements for Stipulation #5 include informing and educating employees about wildlife protection issues, something the company already does as part of their "Wildlife Awareness Program" found under the "Other Compensatory Mitigation" section on page 3-29 of Chapter 3 of the MRP. Stipulation #5 also requires the lessee to "minimize new surface facility construction activities in big game crucial summer habitat from May 15 to July 15." The lessee will also be required to develop a migratory bird and raptor conservation plan that includes a delivery schedule for surveys and monitoring prior to surface-disturbing activities. This plan, at a minimum, "must outline nest surveys, avoidance, and minimization mitigation measures for impacts to migratory birds, birds of conservation concern, raptors, and their habitat." Stipulation #5 also requires the use of barricades or fencing where necessary to protect "wildlife, livestock, and the public."

Stipulation #6 requires the approval, by BLM-KFO, of a sage-grouse mitigation compliance plan that conforms to the Greater Sage-Grouse Mitigation Plan found in Appendix E of the FEIS.

Some of the requirements in these lease stipulations already exist in the current Coal Hollow MRP, however, they are subject to review and approval by the BLM-KFO. This process of review cannot occur until the sale of the lease. Upon being awarded the lease by the BLM, Alton Coal Development, or whoever is the awarded lessee, will then be able to move forward in satisfying the requirements of these and other lease stipulations.

Due to the ongoing federal government shutdown, the review by BLM-KFO has not yet taken place. Following this review and consultation with BLM-KFO, DOGM may proceed to make findings regarding the amendment.

#### *Deficiencies Details:*

The amendment does not meet the State of Utah R645-301-333 requirements for fish and wildlife protection and enhancement plan. The following deficiencies must be met prior to final approval:

R645-301-333:

A wildlife management plan must be created that conforms to Lease Stipulation #5 of the Alton Coal Tract Lease by Application Final EIS.

A commitment to minimize new surface facility construction from May 15 to July 15 must be included in the MRP.

The development of a migratory bird and raptor conservation plan conforming to the requirements of Stipulation #5 must be completed.

A sage-grouse mitigation compliance plan that conforms to Stipulation #6 must be submitted and approved by the BLM-KFO.

Due to the ongoing federal government shutdown, it is understood that it may take time for BLM-KFO to review the items submitted to them regarding this amendment. No action to satisfy this deficiency is required of the permittee until such time that the BLM review has been completed and consultation has occurred between the BLM and DOGM.

tmiller

## **Topsoil and Subsoil**

### *Analysis:*

The application does not meet the requirements of R645-301-232, topsoil and subsoil removal, and R645-301-233.100, utilizing the best available overburden, and R645-301-241, R645-301-242.100, and 242.110, plans for redistribution of soil to achieve a uniform stable thickness, because the soils recovery depths and resulting volume estimates reported on Dwg 2-2 are not accurate with regard to acreage of subsoil salvage and depth of salvage is not supported by the available soils map unit data.

During the initial review of this permit in 2009, a soil survey was presented that encompassed the 635 permit acres of the South Lease. On the 2009 version of Dwg 2-1, the Order II soil survey map presents thirteen soil map units which represented soil complexes (several soil types found together). In evaluating the soil characteristics of the soil complex, a few soil pedons were sampled and analyzed for chemical characteristics. Not every soil type within the complex was sampled. The survey presented a broad description on which to base the soil salvage plan and the redistribution plan at reclamation. As mining progresses, it is not unusual to re-examine an area prior to disturbance in greater detail, especially if the soils handling plan has to be revised due to changes in the volume of stockpiled material. In fact, Dwg 2-1 soil survey was revised in 2014 to map the 30.5 acre Borrow Area in more detail, although it was included in the 2009 original survey.

Accompanying the original soil survey was a topsoil handling map, Dwg 2-2. To address the requirements of R645-301-230 et seq and 232.100, Dwg 2-2 identified source of soil salvage, year of salvage, stockpile locations, volumes in each stockpile, stockpile footprint area, and expected duration of the topsoil stockpile. The reclamation plan described in Chapter 2 is based on the stockpile volumes reported. Revisions of Dwg 2-2 have adjusted the volume of available soil in stockpiles as salvage occurred and as reclamation progressed. Recently, the 2017 mid-term review, Task 5695, revealed a deficit of topsoil and subsoil that was addressed with cut/fill tables on Dwg 2-2. For the purpose of this task, Dwg 2-2 was revised again to adjust for the additional 42 LBA Block 1 acres. The drawing provides

estimates of salvage depth and estimates of volumes to be stockpiled from the presently undisturbed area. The actual recovery will be stated in the annual reporting which has been the practice for Coal Hollow Mine.

Similarly, at Utah underground mine sites, an estimate of salvage is provided at permitting and an as-built updates the cut/fill balance after construction at the site. Differences between the estimated and actual accounting are expected. That is the purpose of the as-built. The reclamation is updated accordingly. There has never been a citation issued for a variation in soil volumes from estimated and actual reporting.

Tracking these volumes has been Division practice for over 30 years. Volumes are important to allow the Division to make the findings under R645-301-232 et seq that all the topsoil and subsoil were removed. And for the Division to make a finding under R645-301-242.100 that all soil salvaged and stockpiled will be redistributed. This information is also used in calculating bonding for replacement of soil.

Since 2017, the mine has a deficit of topsoil and subsoil for reclamation to achieve the reclamation plan which states 8 inches of topsoil replacement and 3.3 feet of subsoil replacement. Please refer to the tables on existing Dwg 2-2 to see the volume in stockpiles and the volume required and the volume anticipated from other sources to make up the difference. On the Dwg 2-2 dated 12/2018 the volume tables reflect the salvage from the 42 acres in LBA Block 1, but do not account for the existing disturbed area where subsoil will be salvaged (personal communication with K. Nicholes, 1/15/2019). In any case, this would create a large volume of poor quality subsoil, according to the soils information on file.

The area salvage is outlined on Dwg 2-2, but an acreage figure is not provided. However, the bonding sheets list 83.8 acres for pits 10 – F-08. From the Dwg 2-2 tables it appears that a depth of 8.5 feet will be cut from the 42 acres to achieve the estimated volume of 573,635 CY. If the larger area of salvage for pit 10b – F-08 development is factored in (i.e. areas currently used for storage around pond 2, primary roads, subsoil stockpile), the depth of salvage will be reduced to obtain the same volume.

In either case, the representative soil samples of the map units to be disturbed indicate that there are limitations to the topsoil recovery in some map units and limitations to the subsoil recovery in some map units due to high pH values below 24 inches (refer to Dwg 2-1). The Division requests that before including these soils in the salvage plan, a few more sites should be investigated to confirm suitability for salvage, in order to recover the best available in the permit area.

If the subsoil material is suitable, this additional volume of topsoil and subsoil would improve the current imbalance in topsoil/subsoil accounting and eliminate the need for "other sources," such as the steep seeded slopes to the East of Pit 10 and the seeded areas in the facilities yard that are along the haulway.

To demonstrate the need for additional information the following information is presented.

Appendix B of Appendix 2-1 states that sample location LOF-1 (in the mine facilities yard) is representative of Map unit 1 Type A soil which will be salvaged just North of undisturbed ditch 4-A-U. The analysis of LOF-1 revealed high pH values below 24 inches (pH = 8.7) and bedrock was encountered at 42 – 60 inches.

Soil pit 28 represents soil map unit 11, but is also a soil type A. The profile depth is similar to LOF-1 soil. (Appendix B).

SP-41 which is described as a representative soil for Map unit 9, soil type D. In the LBA, soil type D is found just East of the primary haul road near culvert 16 (Dwg 5-3). At 64 - 80 inches in SP-41, the texture changes to sandy loam and the pH rises to 8.8.

Map Unit 6 is represented by soil pits 15 and 16. These soil pits revealed unacceptably high pH values at 20 inches (pH of 8.7 or greater).

Soil pit 50 is shown in soil map unit 10 and is in the ZigZag Family. This is a shallow clay soil with a limited topsoil (4 inches). Bedrock was encountered at 19 inches.

Since the soil handling plan relies upon deep salvage of these soils, the Permittee must conduct further field reconnaissance of the map units in the LBA Block 1 to confirm the available soil and its suitability for salvage.

In the previously disturbed location of former topsoil pile 4 the topsoil will be removed (R1), likely to a depth of 8 inches. Then the undisturbed subsoil will be salvaged.

The twenty six previously disturbed acres (storage and repair yards, subsoil stockpile, primary road) within the pit areas 10b – pit F-08 will have subsoil salvaged. The R1 topsoil and subsoil salvage from these previously disturbed acreages has not been accounted for in Dwg 2-2.

Dwg 2-2 describes an average topsoil salvage depth of 0.87 feet (10 inches) from the 42 acre LBA , but omits the volume of R1 soils from the former topsoil pile 4 location.

*Deficiencies Details:*

The application does not meet the R645-301-232 and 233.100 and R645-301-241 and R645-301-242.100 and R645-301-242.110 topsoil and subsoil salvage and redistribution plans.

The following deficiencies must be addressed prior to final approval:

R645-301-232, Dwg 2-2 accounting tables must account for the R1 topsoil and account for acreage of the previously disturbed area that will be developed for pits 10b - F-08 shown on Dwg 5-16, and the subsoil to be recovered from the previously disturbed Phase 1 area, as shown on Dwg 2-2.

R645-301-233.100, R645-301-241, R645-301-242.100 and R645-301-242.110, Since the topsoil and subsoil accounting tables on Dwg 2-2 rely upon a 10 inch topsoil salvage and an 8.5 foot subsoil salvage from Map units 1, 6, 9, 10 & 11 within the LBA Block 1, and since the available data does not support that salvage depth, the Permittee must conduct further reconnaissance of soil map units in the LBA Block 1 to confirm the available soil depth and its suitability for salvage; Update Dwg 2-2 and Chapter 2 soils handling plan information accordingly.

pburton

## Hydrologic Ground Water Monitoring

*Analysis:*

The amendment meets the State of Utah R645 requirements for Groundwater Monitoring.

The amendment proposes to develop open pits extending north of Pit 10. All groundwater resources have been accounted for within the current permitted area of the south lease. As long as open pit mining rests to the west of the Tropic shale ridge as shown on Drawings 5-9 and 5-10 there will be no groundwater resources encountered within the proposed surface mining and highwall mining areas.

kstorrar

## Hydro Surface Water Monitoring

*Analysis:*

The amendment meets the State of Utah R645 requirements for Surface Water Monitoring.

The current water monitoring plan includes surface monitoring sites above, within and below the mining activity. There are currently four water monitoring sits along Lower Robinson creek spaced above, within, and below the permit area. Given the extent of the disturbance stops before Lower Robinson creek and is fully within the limits of the current permit boundary no addition surface water monitoring sites are necessary at this time.

kstorrar

## Hydrologic Diversion General

*Analysis:*

The amendment meets the State of Utah R645 requirements for Diversions.

The amendment includes an update to Appendix 5-2 Hydrology and Runoff Control for the south lease of the Coal Hollow mine. A few of the diversions in the south lease will be modified to accommodate mining development extending north of Pit 10 into the federal coal. The calculations for curve numbers, diversions, and culverts have been updated. Ditch 4 will be extended to the north and east to capture all runoff north of mining operations and convey it to Sediment Pond 3. Ditch 1 will be extended to the north to capture and convey all undisturbed runoff east of the disturbed area past the site and down Sink Valley wash.

The amendment discusses two new culverts will be installed along Ditch 4 shown on Drawing 5-3A on page 3 of Appendix 5-2. These culverts will allow runoff in Ditch 4 to be conveyed past the haul road and down to Pond 3.

kstorrar

## Hydrologic Discharge Structures

### *Analysis:*

The amendment meets the State of Utah R645 requirements for Sediment Ponds.

The amendment proposes to remove Sediment Pond 2 and instead convey the runoff to Sediment Pond 3. Diversion Ditch 4 will be extend to the east running along the southern boundary of Lower Robinson Creek to capture this additional runoff. Table 3 in Appendix 5-2 provides a narrative and calculations showing Sediment Pond 3 is adequately sized to contain and treat runoff reporting to the pond from watershed 3. Sediment pond is sized to accommodate this additional runoff for the required 10 year 24 hour rain event.

kstorrar

## Reclamation Plan

### General Requirements

#### *Analysis:*

The applicant has met the requirements of R645-301-800 General.

The Coal Hollow Mine is presently designated as a Non-Federal Mine. A Non-Federal Mine permit for C/025/0005 was issued on June 21, 2017 with an expiration date of June 21, 2023. Alton Coal Development, LLC also has in place a Non-Federal Reclamation Agreement for the Coal Hollow Mine C/025/0005. Approval of this application will revise the Non-Federal status of the mine to a Federal mine (Federal Coal). This action will require a revised permit to include Federal mine designation. Alton Coal Development, LLC will also be required to complete a new Federal Reclamation Agreement. The Federal Reclamation Agreement will assign the State of Utah, Division of Oil, Gas and Mining (Division) as well as the U.S. Department of the Interior, Office of Surface Mining and Reclamation and Enforcement (OSM) as Obligees of the reclamation bond.

ssteab